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ABSTRACT

In an effort to encourage the participation of educationally disadvantaged youth in the Silicon Valley's high technology employment boom, the Peninsula Academies program was established utilizing a triad-partnership arrangement among the Sequoia Union High School District, high technology employers in the area, and the Stanford Mid-Peninsula Urban Coalition (SMPUC). This paper examines the impact of the evaluation process on the success of the program, emphasizing major factors that contributed to its success: (1) the evaluation was adequately and independently funded; (2) it was designed to be useful; (3) the evaluators monitored the program closely, including full participation at all levels; (4) evaluation results were thoroughly communicated to all participants; and (5) the evaluation was technically sound. An evaluation, it is concluded, needs to be participatory and committed, working with program management over the entire life of a program from conception to replication in order to have an impact on the program's success. (EGS)

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EVALUATION'S CONTRIBUTION TO THE SUCCESS OF A SILICON VALLEY SCHOOL/INDUSTRY PARTNERSHIP: THE PENINSULA ACADEMIES EVALUATION

Paper Presented at Evaluation '84
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EVALUATION'S CONTRIBUTION TO THE SUCCESS OF A SILICON VALLEY SCHOOL/INDUSTRY PARTNERSHIP: THE PENINSULA ACADEMIES EVALUATION

The Academies Program

The Peninsula Academies program began in 1980 as a joint effort at three major Silicon Valley groups that were interested in improving opportunities for educationally disadvantaged youth, especially minority youth, to participate in the Valley's high technology employment boom. The groups involved were: (1) the Sequoia Union High School District; (2) major employers in the area, including Hewlett-Packard, Varian Associates, Lockheed, and other high technology firms with facilities in the northern part of Silicon Valley; and (3) the Stanford Mid-Peninsula Urban Coalition (SMPUC).

With SMPUC acting as the catalyst and broker, the Peninsula Academies program has succeeded in bringing together public and private resources to establish two fully operational schools-within-schools, one oriented to electronics technology and ther other oriented toward computer applications. The structure of the Academies is shown in Figure 1. Thirty-five program graduates left the program this summer with opportunities waiting for them in the participating companies. The experiences of these graduates, and those of the 180 seniors, juniors, and sophomores now enrolled in the program, have included laboratory classes taught by industry volunteers, hands-on experience with modern industry-supplied equipment, special academic instruction that was coordinated with lab requirements, summer jobs, a mentoring program, and numerous other components designed to reach youths who were specifically selected because of their high probability of dropping out of school.

To give a better sense for the substance of the program, Attachment 1 illustrates the goals and objectives of the Academies program, stated for all major participant groups.

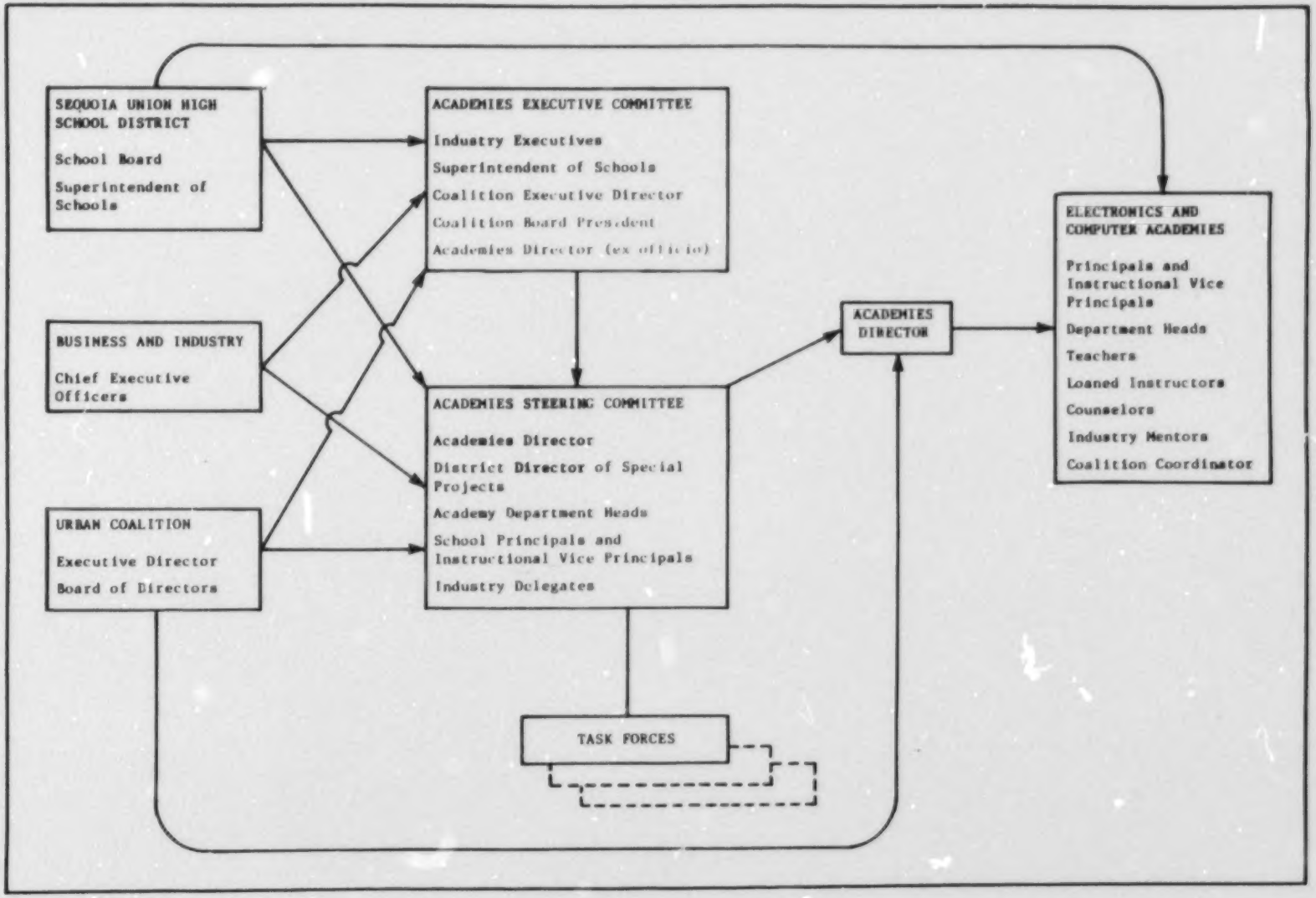

Figure 1. The Academies Partnership Structure

Funded by a four-year, $150,000 grant from the William and Flora Hewlett Foundation in Menlo Park, staff of the American Institutes for Research (AIR) carried out an evaluation for the Peninsula Academies that was designed to promote its excellence. This evaluation began in 1981-82 with a heavy focus on problem identification and resolution; by design, the evaluators spent most of their early effort in (1) helping to clarify program goals, (2) documenting discrepancies between stated goals and actual implementation, and (3) troubleshooting. Only modest effort was devoted to collecting program outcome indicators. In 1982-83, as trouble spots became less numerous, more evaluation resources were expended on documenting program implementation and preparing for impact evaluation. By 1983-84, the evaluators were able to concentrate on program outcomes and the preparation of a Replication Guide for use by potential adopters.

The Peninsula Academies program was recently recognized as exemplary by the State of California. AB 3104, sponsored by Assemblyman Bob Naylor and signed into law by Governor Deukmejian, makes $1.25 million available to fund up to ten replications throughout the state during the forthcoming school year. In addition, with funding from the Edna McConnell Clark Foundation of New York, nationwide replications are currently getting underway in Chicago, Cleveland, Denver, Pittsburgh, and Portland.

Commenting on the impact of the evaluation, the Peninsula Academies director wrote:

> I believe that it could be reasonably argued that the single most cost-effective component of the entire program has been its evaluation. Approximately $840,000 has been spent in cash on the program through the end of the 1983-84 school year, with approximately another $1,045,000 of in-kind contributions, for a total of $1,885,000 (the Replication Guide provides details on these expenditures). The $125,000 spent so far on evaluation constitutes less than 7% of this total. Yet this 7% has done more to establish an effective management structure, build credibility, and stimulate interest in replicating the program than any other expenditure. It has also done more to leverage support from other sources, including the state, than any other single feature of the program. And if the program continues to succeed and serve as a model for other programs, as now appears likely, it will have been due in substantial part to the evaluation.

Factors Contributing to Evaluation Impact

Looking back over our experiences, we believe that the following five factors were most crucial in permitting the evaluation to make a tangible contribution.

1. The evaluation was adequately and independently funded. Evaluations are often underfunded--a truism most evaluators have learned to live with. While the sum of $150,000 over a four-year period is not princely, it has been adequate to allow us considerable freedom in addressing a wide range of program information needs.

Moreover, our sponsor (the Hewlett Foundation) adopted a hands-off attitude from the beginning, encouraging us to develop the evaluation agenda and follow it as we saw fit. There was no pressure for early results, no wrangling over forms clearance or political protocol, no apprehension about the annual appropriations cycle. In short, a critical prerequisite for rational and orderly evaluation was in place.

2. The evaluation was designed to be useful. Evaluations turn out too often to be "devaluations." Early on in their development, programs typically have unclear goals, unrealistic expectations, and confused management; evaluators can easily compound these difficulties by looking for evidence of program impact prematurely. Although retrospective information on why programs failed is not without value, it does little service to the clients whom the program was designed to assist. From the beginning, the Peninsula Academies evaluation was designed to avoid this pitfall. Our early efforts were devoted almost entirely to providing assistance in resolving both technical and management problems as soon as we detected them. Only after we were satisfied that a program capable of producing impact was in place did we begin to collect and report outcome data. Attachment 2 contains an overview of the evaluation activities, arranged according to four distinct stages of program maturation.

3. The evaluators "kept close to the client." We viewed our client as the Peninsula Academies program, and our staff did considerable "wandering around" on the client's premises. From the beginning of the program, we attended all meetings of the Academies Executive and Steering Committees, conducted systematic classroom observations in the fall and spring of each academic year, and interviewed all major participants at the end of the school year in preparation for annual "interim" evaluation reports. In addition, we periodically interviewed selected students and parents (in their native language when necessary) and sought exit interviews with every program dropout. Our goal was to achieve an in-depth understanding of the Academies program--its context, dynamics, successes, and improvement needs. Attachment 3 contains a list of topics about which AIR prepared issue papers, in response to specific problems being encountered by Academies management.

When the evaluation's focus later began to shift from operational assistance to documentation and valuation of outcomes, some questions were asked about our objectivity: how can someone so closely allied with the program be entrusted with evaluating it? Our general approach to this question was to let the data speak for themselves. There could be little debate about the quantitative outcomes that supported the emerging picture of program success: better attendance rates, lower school dropout rates, better grades, more summer employment opportunities, and better test performance by Academies students in comparison with similar nonparticipants. When coupled with impressive process data showing the extent of industry participation and the enthusiasm of students and teachers, the possibility of "collusion" between the evaluator and program management became irrelevant.

4. The evaluation results were thoroughly communicated. We made a conscious effort to communicate our findings on a timely basis in forms that were appropriate to the intended information users. When Steering Committee members faced thorny problems, our "issue reports" attempted to clarify them, provide possible options, and discuss likely outcomes of each option--before a decision had to be made. Our interim reports on outcomes and unresolved problems were written in plain English and widely distributed to all actors

in the program. Brief two-page summaries accompanied each report. When major or minor public forums were held to discuss the Academies, we were there to speak. When replication began to be discussed well before the first Academies classes had graduated, we accelerated preparation of the Replication Guide by a full year. Attachment 3 contains a copy of the Table of Contents for this Replication Guide.

5. The evaluation was technically sound. Having been exposed over the years to almost all of the technical shortcomings that allow evaluations to be contested and set aside, we tried to design the evaluation to preempt methodological criticism. For example, we invested major effort in identifying and then tracking a comparison group of students for each incoming Academies class. We also devoted considerable attention to the collection and processing of archival records and the calculation of statistics that converted these data into meaningful information. Although there were no plans to do so, we acted as if the evaluation was going to be submitted to external validation by a group such as the Department of Education's Joint Dissemination Review Panel (JDRP).

Conclusion

In their book In Search of Excellence, Tom Peters and Bob Waterman discuss the importance of (1) single-minded commitment to detail and (2) an enduring central value that both drives this commitment and serves as a standard against which progress can be judged. We believe that these elements also can be found in evaluations that have impact.

It is easy to view evaluation as a detached process--cold and objective. But this detachment too often produces an evaluation that is sterile and useless. Evaluation in the service of excellence is not detached. It is participatory and committed, working with program management over the entire life of a program from conception to replication. The future of evaluation as a professional discipline would seem to hinge on evaluators' success in learning this lesson.

Attachment 1

PENINSULA ACADEMIES

Program Goals

1. To serve an educationally disadvantaged and largely minority population of students who may not be succeeding in traditional school programs, may drop out, and who lack employable skills.

2. To meet the vocational training needs of such students for skilled and semi-skilled positions with local companies, and to satisfy partially the needs of employers for employees in the selected fields of training.

3. To confront the problem of youth unemployment among the target population, and to establish a model of possible use in other schools, districts, and localities.

Program Objectives

Students

1. To exhibit improved attitudes toward school and learning.

2. To exhibit improved academic performance.

3. To exhibit improved self-esteem.

4. To complete the three-year Academies program and develop skills adequate for skilled and semi-skilled positions in electronics or computer operations in local companies.

5. To gain knowledge of the world of work and skills in choosing a suitable career path.

6. After graduation, to find satisfactory employment and succeed on the job, or enroll in a program of postsecondary training.

Parents

1. To be knowledgeable of the Academies program and its objectives and requirements.

2. To support their children in the decision to enter the program and in their efforts in completing the program.

3. To assist the teachers in dealing with behavior/motivation problems that may occur.

4. To provide support to various other program activities.

School Personnel (Teachers, Counselors, and Administrators)

1. To contribute to the planning and definition of the program.

2. To provide the necessary facilities for the Academies. (Administrators)

3. To provide an effective curriculum for the Academies, in conjunction with industry and the Coalition. (Teachers)

4. To provide academic instruction for the program related to the vocational instruction, that will improve basic skills and that will meet the district's proficiency objectives in English (reading and writing), mathematics, and science. (Teachers)

5. To provide students with career guidance. (Counselors)

6. To provide the necessary high-level support within the schools and district and contribute to the program's long-term stability. (Administrators)

Private Sector Representatives

1. To contribute to the planning and definition of the program, including effective technical curricula, to ensure that students receive training appropriate for beginning positions.

2. To contribute financial resources to the program.

3. To provide the necessary industrial instructors and mentors for the program.

4. To help provide the necessary equipment and materials for the program.

5. To provide on-site training opportunities for students.

6. To provide employment opportunities for qualified program graduates.

7. To exhibit knowledge of and support for the program to others, expand the private sector participation in the program, and promote the long-term stability of the program.

Coalition Staff

1. To provide the necessary organization to plan and develop the program and the management and support to maintain it [for the field test period].

2. To obtain from industry those contributions necessary for the development and ongoing support of the program.

3. To obtain from the schools those contributions necessary for the development and ongoing support of the program.

4. To bring together industry and the schools into a working partnership and foster the institutionalization of this partnership and the program.

5. To ensure the presence in the program of basic defining elements: integration of academic and vocational instruction, individualization of instruction, motivational components, and career counseling.

6. To develop and use an effective monitoring and feedback system for the program (in conjunction with the schools).

Attachment 2

Peninsula Academies

ROLES OF THE ASSISTANCE/EVALUATION CONTRACTOR

by Stage of Project Development

PLANNING STAGE

- Provide technical assistance for development of program strategies.
- Document planning efforts, recording obstacles, solutions, strategies.
- Work with curriculum committee to identify learner performance objectives.
- Provide technical assistance for development of management system.
- *Develop consensus on program goals and objectives for all participants: students, parents, school personnel, private sector representatives, and broker agency staff.*
- *Identify outcome measures and data sources for each program objective.*

START-UP STAGE

- Document student recruitment and selection process and resulting student enrollment profile.
- Prepare background papers on policy and management issues at request of Director, Executive Committee, and Steering Committee.
- Document program policies, for example procedures for dealing with problem students and development of de-selection criteria.
- *Develop data collection plan and build system for ongoing monitoring of program effectiveness.*
- *Select comparison groups of nonparticipating students.*

IMPLEMENTATION & REFINEMENT STAGE

- Attend meetings of Executive and Steering Committees, providing technical assistance as requested and documenting issues, decisions, and solutions.
- Make classroom observations, providing feedback on instructional approaches, attitudes, facilities, curriculum, and linkages.
- Document motivational/enrichment activities, such as field trips to industry.
- Work with teachers to refine curriculum.
- Conduct informal interviews with program staff periodically to monitor implementation trends and verify feasibility of stated program objectives.
- *Collect data on attendance, attrition, and academic performance (grades, proficiency test scores, district standardized test results) for Academy students and comparison group students.*
- *Annually survey students who have completed summer or senior-year work experience; compile evaluations of student workers from industry supervisors.*
- *Annually survey students, parents, administrators, teachers, counselors, and industry participants to assess progress toward meeting program objectives.*
- *Conduct follow-up survey of first group of program graduates regarding their employment status and post-secondary training/education activities.*
- *Produce annual evaluation reports tracing progress toward meeting program objectives and outlining areas where improvements are needed.*

INSTITUTIONALIZATION STAGE

- Develop design for ongoing internal program evaluation and performance monitoring system.
- *Produce a Replication Guide describing the program, the participants, the management structure, the developmental process; discussing problems and their solutions; and including materials and suggestions useful to other school-industry collaborators wishing to replicate the program elsewhere.*
- *Produce final technical evaluation report presenting data on program effectiveness and analyzing and discussing program activities that led to successful/unsuccessful outcomes.*
- *Produce non-technical final report tracing the program's development, profiling the program and its students, and presenting highlights of findings from the technical report.*

- technical assistance activities
- *evaluation activities*

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Attachment 3

Issues Addressed by Special Evaluation Reports

- Defining student selection criteria and procedures
- Development of curriculum
- Defining a workable program management structure
- Defining acceptable and measurable program goals and objectives
- Defining the roles of the various committees, and how they fit together
- Addressing the issue of employment skills and their measurement
- Developing coordination between the Academies and the general school program
- Broadening the industry support base
- Refining program decision-making mechanisms
- Evolving procedures for dealing with problem students, including expulsion criteria and procedures
- Identifying appropriate entry-level jobs, especially in the computer area
- Integrating career counseling
- Defining staff orientation and development needs
- Providing role clarification for the school, Coalition, and committee representatives
- Refining the program's organizational model and planning for institutionalization

Attachment 4

REPLICATION GUIDE TABLE OF CONTENTS

		Page
Acknowledgments		
Preface		i
I.	Origins of the Academies Concept	1
	Context: Why Start an Academy Here?	1
	Historical Sketch of the Peninsula Academies	3
	Key Features of the Program	6
II.	The Academies Management Structure	7
	Overview	7
	The Executive Committee	7
	The Steering Committee	9
	Task Forces	10
III.	The Governing Structure: Schools, Corporations, and Broker Agency	13
	School Representation	13
	Corporate Representation	19
	Broker Representation	31
IV.	Academies Students	37
	What Is the Target Population?	37
	How Does the Selection Process Work?	39
	What About Late Entry?	40
	Do Students Drop Out of the Program?	43
V.	Curriculum and Instruction	47
	The Curriculum Development Process	47
	Sketch of the Computer Technology Curriculum	49
	Sketch of the Electronics Technology Curriculum	53
	Sketch of the Academic Curriculum: English, Math, and Science	55
	Instructional Strategies	59
	Enrichment Activities and Work Experience	62

		Page
VI.	Performance Monitoring and Evaluation	67
	The Role of the Evaluator	67
	Setting Program Objectives	68
	Designing the Evaluation	68
	Types of Data Collected and Records Maintained	71
VII.	The Replication Process	75
	Twelve Essential Replication Tasks	75
	Budgeting Considerations	87
	Problems and Solutions	95
APPENDIX		105